INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We make Indiana a cleaner, healthier place to live.

Joseph E. Kernan
Governor

Lori F. Kaplan
Commissioner

100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.in.gov/idem

October 9, 2003

TO: Interested Parties / Applicant

RE: Precision Processes Division / 141-17522-00141

FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Approval - Registration

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 4-21.5-3-4(d) this order is effective when it is served. When served by U.S. mail, the order is effective three (3) calendar days from the mailing of this notice pursuant to IC 4-21.5-3-2(e).

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

(1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
(2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
(3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

(1) the name and address of the person making the request;
(2) the interest of the person making the request;
(3) identification of any persons represented by the person making the request;
(4) the reasons, with particularity, for the request;
(5) the issues, with particularity, proposed for considerations at any hearing; and
(6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FN-REGIS.dot 9/16/03

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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October 9, 2003

Mr. John Hiler
Precision Processes Division
P.O. Box 639
LaPorte, Indiana 46352

Re: Registered Operation Status,
141-17522-00141

Dear Mr. Hiler:

The application from Precision Processes Division, received on January 29, 2003, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the following finishing and cleaning of ferrous and non-ferrous castings plant to be located at 31350 Fulmer Road, Walkerton, Indiana 46574, is classified as registered:

(a) Two (2) shot blasting units (identified as Blaster 1 and 2), each with a maximum throughput rate of 6,000 pounds of metal castings per hour. Blaster 1 and 2 are controlled by two (2) baghouses identified as Dust 2 and Dust 11, respectively. Blaster 1 and Blaster 2 were constructed in 1992 and 1999, respectively.

(b) Twenty-seven (27) stationary grinders, each with a maximum capacity of 285 pounds of metal castings per hour. Grinders 1 through 9 and grinders 14 through 22 are controlled by a dust collector identified as Dust 1; grinders 23 and 24 are controlled by a dust collector identified as Dust 3; grinders 25 and 26 are controlled by a dust collector identified as Dust 4; grinder 27 is controlled by a dust collector identified as Dust 5; grinders 28 and 29 are controlled by a dust collector identified as Dust 6; grinder 30 is controlled by a dust collector identified as Dust 9; and grinder 31 is controlled by a dust collector identified as Dust 10. Grinders 1, 2, 3, 4, 5, 6, 7, 16, 17, 18, 20, 21 and 22 were installed in 1992; grinders 23, 24, 25, 26 and 27 were installed in 1998; and grinders 8, 9, 14, 15, 28, 29, 30 and 31 were installed in 1999.

(c) Forty (40) hand held grinders, each with a maximum capacity of 4,000 pounds of metal castings per hour.

(d) One (1) vibratory finisher, with a maximum throughput rate of 5,000 tons of metal castings per hour. This unit was installed in 1999.

(e) One (1) reflector assembly area, utilizing adhesive application on metal castings, with a maximum capacity of 110 gallons of adhesive per year. This unit was constructed in 1999.

(f) Two (2) space heaters (identified as Heater 1 and 2) burning natural gas. Heater 1 has a maximum heat input capacity of 0.4 MMBtu per hour and Heater 2 has a maximum heat input capacity of 1.925 MMBtu per hour. Heater 1 and Heater 2 were installed in 1992 and 1998, respectively.

(g) Six (6) stationary grinders, each with a maximum throughput rate of 1,250 pounds of metal castings per hour, and controlled by two (2) fabric filters. Two (2) grinders will be installed in 2003 while the four (4) remaining grinders will be installed in 2004.

(h) One (1) shot blasting unit (identified as Blaster 3), with a maximum throughput rate of 6,000 pounds of metal castings per hour, and controlled by a baghouse identified as Dust 12. This unit will be installed in 2004.

The following conditions shall be applicable:

(a) Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following:

(1) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

(b) Pursuant to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from the finishing and cleaning of ferrous and non-ferrous castings plant shall not exceed the particulate emission limit in pounds per hour as shown in table below.

Facility	Process Weight		Particulate Emission Limit (lbs/hour)
	(lbs/hour)	(tons/hour)	
Each of the 3 Shot Blasting Machines	6,000	3.0	8.56
Each of the 27 Stationary Grinders	285	0.14	1.11
1 Vibratory Finisher	5,000	2.50	7.58
Each of the 40 Hand Held Grinders	4,000	2.00	6.52
Each of the 6 Stationary Grinders	1,250	0.63	2.99

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

The three (3) dust collectors (identified as Dust 2, Dust 11, and Dust 12) used in conjunction with the three (3) shot blasting units shall be in operation at all times the three (3) shotblasting units are in operation in order to comply with the above limit.

This registration is the sixth air approval issued to this source. The source may operate according to 326 IAC 2-5.5.

An authorized individual shall provide an annual notice to the Office of Air Quality (OAQ) and Office of Environmental Services (OES) that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.5-4(a)(3). The annual notice shall be submitted to:

Compliance Branch
Office of Air Quality
100 North Senate Avenue
P.O. Box 6015
Indianapolis, IN 46206-6015

no later than March 1 of each year, with the annual notice being submitted in the format attached.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Pursuant to Contract No. A305-0-00-36, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Sanober Durrani, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 468-7810 to speak directly to Ms. Durrani. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027, and ask for Duane Van Laningham, or extension 3-6878, or dial (317) 233-6878.

Sincerely,

Original signed by
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments

ERG/SD

cc: File - St. Joseph County
St. Joseph County Health Department
Air Compliance - Rick Reynolds
Northern Regional Office
Permit Tracking - Sara Cloe
Technical Support and Modeling - Michele Boner
Compliance Branch - Karen Nowak

Registration

This form should be used to comply with the notification requirements under 326 IAC 2-5.5-4(a)(3)

Company Name:	**Precision Processes Division**
Address:	**31350 Fulmer Road**
City:	**Walkerton, Indiana 46574**
Authorized individual:	**John Hiler**
Phone #:	**(219) 362-8531**
Registration #:	**141-17522-00141**

I hereby certify that Precision Processes Division is still in operation and is in compliance with the requirements of Registration 141-17522-00141.

Name (typed):
Title:
Signature:
Date:

issued October 9, 2003
Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Registration

Source Background and Description

Source Name:	Precision Processes Division
Source Location:	31350 Fulmer Road, Walkerton, Indiana 46574
County:	St. Joseph
SIC Code:	3449
Operation Permit No.:	141-17522-00141
Permit Reviewer:	ERG/SD

The Office of Air Quality (OAQ) has reviewed an application from Precision Processes Division, relating to the operation of a finishing and cleaning of ferrous and non-ferrous castings plant.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

(a) Two (2) shot blasting units (identified as Blaster 1 and 2), each with a maximum throughput rate of 6,000 pounds of metal castings per hour. Blaster 1 and 2 are controlled by two (2) baghouses identified as Dust 2 and Dust 11, respectively. Blaster 1 and Blaster 2 were constructed in 1992 and 1999, respectively.

(b) Twenty-seven (27) stationary grinders, each with a maximum capacity of 285 pounds of metal castings per hour. Grinders 1 through 9 and grinders 14 through 22 are controlled by a dust collector identified as Dust 1; grinders 23 and 24 are controlled by a dust collector identified as Dust 3; grinders 25 and 26 are controlled by a dust collector identified as Dust 4; grinder 27 is controlled by a dust collector identified as Dust 5; grinders 28 and 29 are controlled by a dust collector identified as Dust 6; grinder 30 is controlled by a dust collector identified as Dust 9; and grinder 31 is controlled by a dust collector identified as Dust 10. Grinders 1, 2, 3, 4, 5, 6, 7, 16, 17, 18, 20, 21 and 22 were installed in 1992; grinders 23, 24, 25, 26 and 27 were installed in 1998; and grinders 8, 9, 14, 15, 28, 29, 30 and 31 were installed in 1999.

(c) Forty (40) hand held grinders, each with a maximum capacity of 4,000 pounds of metal castings per hour.

(d) One (1) vibratory finisher, with a maximum throughput rate of 5,000 tons of metal castings per hour. This unit was installed in 1999.

(e) One (1) reflector assembly area, utilizing adhesive application on metal castings, with a maximum capacity of 110 gallons of adhesive per year. This unit was constructed in 1999.

(f) Two (2) space heaters (identified as Heater 1 and 2) burning natural gas. Heater 1 has a maximum heat input capacity of 0.4 MMBtu per hour and Heater 2 has a maximum heat

input capacity of 1.925 MMBtu per hour. Heater 1 and Heater 2 were installed in 1992 and 1998, respectively.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

New Emission Units and Pollution Control Equipment Receiving Prior Approval

(g) Six (6) stationary grinders, each with a maximum throughput rate of 1,250 pounds of metal castings per hour, and controlled by two (2) fabric filters. Two (2) grinders will be installed in 2003 while the four (4) remaining grinders will be installed in 2004.

(h) One (1) shot blasting unit (identified as Blaster 3), with a maximum throughput rate of 6,000 pounds of metal castings per hour, and controlled by a baghouse identified as Dust 12. This unit will be installed in 2004.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

(a) MSOP 141-10838-00141, issued on October 18, 1999.

(b) CP141-9935-00141, issued on September 30, 1998.

(c) RP141-9367-00141, issued on February 10, 1998.

(d) A141-9130-00141, issued on December 1, 1997.

(e) CP141-6710-00141, issued on July 23, 1997.

All conditions from previous approvals were incorporated into this permit.

Air Pollution Control Justification as an Integral Part of the Process

The company has submitted the following justification such that the three (3) dust collectors, identified as Dust 2, 11 and 12 be considered as an integral part of the three shot blasting units.

Each dust collector used in conjunction with the shot blasting machine is utilized to create the air curtain necessary to separate the sand and dust from the shot curtain prior to cleaning the casting. The dust collector pulls the lightweight sand and dust material out of the shot curtain. This allows only the shot to enter the cleaning chamber of the machine. The sand would damage the casting if it were to enter the cleaning chamber. Furthermore, the function of the shot blasting machine is to prepare the casting surface finish and this can only be done by the removal of the sand and dust. Since the dust collector is purifying the air prior to the shot cleaning operation, the air is cleaned before the blasting occurs and not after the blasting. Any sand left in the blasting would damage the casting.

IDEM, OAQ has evaluated the justifications and agreed that the three (3) dust collectors, identified as Dust 2, 11, and 12 will be considered as an integral part of the three (3) shot blasting units. Therefore, the permitting level will be determined using the potential to emit after the three (3) dust collectors, identified as Dust 2, 11, and 12. Operating conditions in the proposed permit will specify that this three (3) dust collectors, identified as Dust 2, 11, and 12 shall operate at all times when the three (3) shot blasting units are in operation.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on January 29, 2003.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (Appendix A, i.e. pages 1 through 6).

Potential To Emit of Source or Revision Before Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential To Emit (tons/year)
PM	17.4
PM10	3.19
SO_2	0.01
VOC	0.23
CO	0.86
NO_x	1.02

HAP's	Potential To Emit (tons/year)
Single HAP (Lead)	1.03
Combination of HAPs	<25

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of criteria pollutants is less than 100 tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

(b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of criteria pollutants is less than 25 tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-6.1.

(c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM and Lead pollutants are greater than levels listed in 326 IAC 2-1.1-3(d)(1), therefore the source is subject to the provisions of 326 IAC 2-5.5.1. A registration will be issued.

(d) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a

combination of HAPs is less than twenty-five (25) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

(e) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

County Attainment Status

The source is located in St. Joseph County.

Pollutant	Status
PM10	Attainment
SO_2	Attainment
NO_2	Attainment
Ozone	Maintenance
CO	Attainment
Lead	Attainment

(a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. St. Joseph County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) St. Joseph County has been classified as attainment or unclassifiable for all criteria. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(c) Fugitive Emissions
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2, and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD applicability.

Source Status

Existing Source PSD, Part 70 or FESOP Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/year)
PM	17.4
PM10	3.19
SO_2	0.01
VOC	0.23
CO	0.86
NO_x	1.02

(a) This existing source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.

(b) These emissions were based on revised potential to emit calculations as shown in Appendix A.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

(a) each criteria pollutant is less than 100 tons per year,

(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and

(c) any combination of HAPs is less than 25 tons/year.

This status is based on the revised potential to emit calculations (see Appendix A).

Federal Rule Applicability

(a) There are no New Source Performance Standard (NSPS), 326 IAC 12, (40 CFR 60) applicable to this source.

(b) There are no other National Emission Standard for Hazardous Air Pollutant (NESHAPs) (326 IAC 14 and 40 CFR 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration)

Precision Processes Division was constructed in 1992 and is not in one (1) of the twenty-eight (28) source categories. At construction, the source had a potential to emit of all criteria pollutants less than 250 tons per year. The source was modified in 1998 to add one (1) space heater (identified as Heater 2) and five (5) stationary grinders (identified as grinders 23, 24, 25, 26 and 27); in 1999 to add one (1) shot blasting unit (identified as Blaster 2), and eight (8) stationary grinders identified as 8, 9, 14, 15, 28, 29, 30 and 31. These modifications resulted in the potential to emit of PM greater than 250 tons per year. However, an incorrect emission factor was utilized to calculate the potential to emit of PM from the twenty-seven (27) stationary grinders, which resulted in PM emissions greater than the PSD threshold. During the preparation of this permit, the error was corrected, and the potential to emit of each criteria pollutant from the entire source remained less than 250 tons per year. The addition of two (2) new stationary grinders in 2003, four (4) new stationary grinders and one (1) shot blasting unit (identified as Blaster 3) in 2004 does not increase the PM/PM10 emissions significantly. Therefore, the source is a minor source under PSD and is not subject to the requirements of 326 IAC 2-2.

326 IAC 2-6 (Emission Reporting)

This source is located in St. Joseph County and the potential to emit of VOC and NOx is less than ten (10) tons per year. Therefore, 326 IAC 2-6 does not apply.

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 2-4.1(Major Source of Hazardous Air Pollutants (HAPs))

The operation of finishing and cleaning of ferrous and non-ferrous castings will emit less than 10 tons per year of a single HAP or 25 tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

State Rule Applicability - Reflector Assembly

326 IAC 8-1-6 (New Facilities - General Reduction Requirement)

The reflector assembly area, utilizing adhesive application does not have potential VOC emissions equal to or greater than twenty five (25) tons per year, therefore this source is not subject to the provisions of 326 IAC 8-1-6.

326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)

This facility is not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because the reflector assembly facility uses less than five (5) gallons of adhesive per day.

State Rule Applicability - Shot Blasting Machines, Stationary Grinders, Hand Held Grinders, Vibratory Finisher

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

Pursuant to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes), the particulate emissions from the finishing and cleaning of ferrous and non-ferrous castings plant shall not exceed the particulate emission limit in pounds per hour as shown in table below.

Facility	Process Weight		Particulate Emission Limit (lbs/hour)
	(lbs/hour)	(tons/hour)	
Each of the 3 Shot Blasting Machines	6,000	3.0	8.56
Each of the 27 Stationary Grinders	285	0.14	1.11
1 Vibratory Finisher	5,000	2.50	7.58
Each of the 40 Hand Held Grinders	4,000	2.00	6.52
Each of the 6 Stationary Grinders	1,250	0.63	2.99

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

The three (3) dust collectors (identified as Dust 2, Dust 11, and Dust 12) used in conjunction with the three (3) shot blasting units shall be in operation at all times the three (3) shotblasting units are in operation in order to comply with the above limit.

Based on the potential to emit calculations, the particulate emissions from one (1) vibratory finisher is 0.03 pounds per hour. Therefore, the source will be in compliance with this rule.

Based on the potential to emit calculations, the particulate emissions from the 27 existing stationary grinders is 0.039 pounds per hour, while the particulate emissions from the 6 new stationary grinders is 0.037 pounds per hour. Therefore, the source will be in compliance with this rule.

Based on the potential to emit calculations, the particulate emissions from the forty (40) hand held grinders is 0.80 pounds per hour. Therefore, the source will be in compliance with this rule.

State Rule Applicability - Combustion Units

There are no specifically applicable regulations that apply to these emission units.

Conclusion

The operation of this finishing and cleaning of ferrous and non-ferrous castings plant shall be subject to the conditions of the attached proposed Registration 141-17522-00141.

Appendix A: Emission Calculations
Two (2) Space Heaters (< 100 MMBtu/hour)
Natural Gas Combustion

Company Name: Precision Process Division
Address: 31350 Fulmer Road, Walkerton, Indiana 46574
Registration: 141-17522
Plt ID: 141-00141
Reviewer: ERG/SD
Date: July 14, 2003

Total Heat Input Capacity MMBtu/hour		Potential Throughput MMCF/year
2.33	(2 units total)	20.4

Pollutant

	PM*	PM10*	SO_2	NO_x	VOC	CO
Emission Factor (lb/MMCF)	7.6	7.6	0.6	100.0 **see below	5.5	84.0
Potential To Emit (tons/year)	0.08	0.08	0.01	1.02	0.06	0.86

*PM and PM10 emission factors are filterable and condensible PM and PM10 combined.
**Emission Factors for NO_x: Uncontrolled = 100, Low NO_x Burner = 50, Low NO_x Burners/Flue gas recirculation = 32

All Emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission factors from AP-42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC 1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (July, 1998).

METHODOLOGY
Potential Throughput (MMCF/year) = Heat Input Capacity (MMBtu/hour) * 8760 hours/year * 1 MMCF/1000 MMBtu
Potential To Emit (tons/year) = Potential Throughput (MMCF/year) * Emission Factor (lb/MMCF) * 1 ton/2000 lbs

See next page for HAPs emissions calculations.

Appendix A: Emission Calculations
Two (2) Space Heaters (< 100 MMBtu/hour)
Natural Gas Combustion

Company Name: Precision Process Division
Address: 31350 Fulmer Road, Walkerton, Indiana 46574
Registration: 141-17522
Plt ID: 141-00141
Reviewer: ERG/SD
Date: July 14, 2003

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor (lb/MMCF)	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential To Emit (tons/year)	2.14E-05	1.22E-05	7.64E-04	1.83E-02	3.46E-05

HAPs - Metals

	Lead	Cadmuim	Chromium	Manganese	Nickel
Emission Factor (lb/MMCF)	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential To Emit (tons/year)	5.09E-06	1.12E-05	1.43E-05	3.87E-06	2.14E-05

Methodology is the same as previous page.

The five highest organic and metal HAPs emission factors as provided above are from AP-42, Chapter 1.4, Table 1-4.2, 1.4-3 and 1.4-4 (July, 1998). Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
VOC and HAP Emissions
From Adhesive Application

Company Name: Precision Process Division
Address: 31350 Fulmer Road, Walkerton, Indiana 46574
Registration: 141-17522
Plt ID: 141-00141
Reviewer: ERG/SD
Date: July 14, 2003

Material	Density (lb/gal)	Max. Usage Rate (gal/hour)	Volatile Content %	PTE VOC (ton/year)
Adhesive	9.22	0.013	34%	0.17
TOTAL				**0.17**

Not4: This adhesive does not contain any HAP emission.

METHODOLOGY
Potential To Emit VOC (tons/year) = Density (lb/gal) * Max. Usage Rate (gal/hour) * Volatile Content % * 8760 hours/year * 1 ton/2000 lb

Appendix A: Emissions Calculations
PM/PM10 and Lead Emissions
From Three (3) Shot Blasting Units

Company Name: Precision Process Division
Address: 31350 Fulmer Road, Walkerton, Indiana 46574
Registration: 141-17522
Plt ID: 141-00141
Reviewer: ERG/SD
Date: July 14, 2003

Control = Three (3) dust collectors are used in conjunction with three shot blasting machines and are considered integral to control.
Therefore, potential to emit of PM and PM10 are after controls

Material	Max. Throughput Rate (lbs/hour)	Max. Throughput Rate (tons/hour)	* Emission Factor PM (lbs/ton)	* Emission Factor PM10 (lbs/ton)	Potential To Emit After Control PM (tons/year)	Potential To Emit After Control PM10 (tons/year)	Control Efficiency %	** Lead Content %	PTE of Lead (tons/year)
Metal Castings	18000	9.00	17	1.7	13.4	1.34	98%	7.7%	1.03
TOTAL					**13.4**	**1.34**			**1.03**

Note: the 3 shot blasting units each have a max. throughput of 6000 lbs/hour or combined max. throughput of 18000 lbs/hour.

*PM10 emission factor is from FIRE Volume II, Chapter 14, Grey Iron Foundries - SCC 3-04-003-40 (July, 2001).
* PM emission factor is from AP-42, Table 12.10-7 - Cleaning and Finishing (SCC 3-04-003-40) (05/03).
** Lead emissions are based on the lab test conducted by the source.

METHODOLOGY
PTE PM/PM10 (tons/year) = Max.Throughput Rate (tons/hour) * Emission Factor (lbs/ton) * 8760 hours/year * 1 ton/2000 lbs * (1-Control Efficiency %)
PTE Lead (tons/year) = Max. Throughput Rate (tons/hour) * PM Emission Factor (lbs/ton) * 8760 hours/year * 1 ton/2000 lbs * Lead Content (%)

Appendix A: Emissions Calculations
PM/PM10 and Lead Emissions
From Twenty-nine (29) Grinders, One (1) Vibratory Finisher and Forty (40) Hand Held Grinders

Company Name: Precision Process Division
Address: 31350 Fulmer Road, Walkerton, Indiana 46574
Registration: 141-17522
Plt ID: 141-00141
Reviewer: ERG/SD
Date: July 14, 2003

Material	Max Throughput Rate (lbs/hour)	(tons/hour)	* Emission Factor PM (lbs/ton)	PM10 (lbs/ton)	Potential To Emit PM (tons/year)	PM10 (tons/year)	** Lead Content %	PTE of Lead (tons/year)
40 Hand Held Grinders	160000	80.0	0.01	0.0045	3.50	1.58	7.7%	0.27
Vibratory Finisher	5000	2.50	0.01	0.0045	0.11	0.05	7.7%	0.008
27 Stationary Grinders	7695	3.85	0.01	0.0045	0.17	0.08	7.7%	0.013
6 New Stationary Grinders	7500	3.75	0.01	0.0045	0.16	0.07	7.7%	0.013
TOTAL					**3.95**	**1.78**		**0.30**

Note: the 40 hand held grinders each have a max. throughput of 4000 lbs/hour or combined max. throughput of 160,000 lbs/hour.
the 27 stationary grinders each have a max. throughput rate of 285 lbs/hour or a combined max. throughput of 7695 lbs/hour.
the 6 new stationary grinders each have a max. throughput of 1250 lbs/hour or a combined max. throughput of 7500 lbs/hour.

* Emission factors are from FIRE Volume II, Chapter 14, Grey Iron Foundries - SCC 3-04-003-40 (July, 2001).
** Lead emissions are based on the lab test conducted by the source.

METHODOLOGY
PTE PM/PM10 (tons/year) = Max. Throughput Rate (tons/hour) * Emission Factor (lbs/ton) * 8760 hours/year * 1 ton/2000 lbs
PTE Lead (tons/year) = Max. Throughput Rate (tons/hour) * PM Emission Factor (lbs/ton) * 8760 hours/year * 1 ton/2000 lbs * Lead Content (%)

Appendix A: Emissions Calculations
Summary Emissions

Company Name: Precision Process Division
Address: 31350 Fulmer Road, Walkerton, Indiana 46574
Registration: 141-17522
Plt ID: 141-00141
Reviewer: ERG/SD
Date: July 14, 2003

POTENTIAL TO EMIT IN TONS PER YEAR

Emission Units	PM	PM10	SO_2	NO_x	VOC	CO	* Highest Single HAP	Combined HAP
Combustion Units_NG	0.08	0.08	0.01	1.02	0.06	0.86	negligible	negligible
Adhesive Application					0.17			
3 Shot Blasting Units	13.4	1.34					1.03	1.03
40 Hand Held Grinders	3.50	1.58						0.27
33 Stationary Grinders	0.33	0.15						0.03
Vibratory Finisher	0.11	0.05						8.4E-03
TOTAL SUM	17.4	3.19	0.01	1.02	0.23	0.86		1.34

* Lead